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## **Directive Versus Supportive Approaches Used by Midwives When Providing Care During the Second Stage of Labor**

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# Directive Versus Supportive Approaches Used by Midwives When Providing Care During the Second Stage of Labor

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## Abstract

### Introduction

Although the risks associated with using sustained and forceful maternal bearing-down efforts during the second stage of labor have been well documented, most women who give birth in the United States bear down in response to direction from care providers about when and how to push rather than in response to their own physiologic urges. The purpose of this study was to describe the practices used by certified nurse-midwives/certified midwives (CNMs/CMs) in response to maternal bearing-down efforts when caring for women in second-stage labor and to identify factors associated with the use of supportive approaches to second-stage labor care.

### Methods

A national survey of 705 CNMs/CMs was conducted using mailed questionnaires. The instrument was an 84-item, fixed-choice questionnaire using Likert type scales that had been validated. A 72.6% response rate was achieved, and 375 of the respondents cared for women during the second stage of labor.

### Results

Most CNMs/CMs (82.4%) often or almost always supported women without epidural anesthesia to initiate bearing-down efforts only when the woman felt an urge to do so. When caring for women without an epidural, most of the respondents (67%) reported that they often

or almost always supported a woman's spontaneous bearing-down efforts without providing direction. Most participants reported using more directive practices when caring for women with epidural anesthesia. Whether caring for women with or without an epidural, most respondents (77.1% and 79.6%, respectively) often or almost always provided more direction as the fetal head emerged and the final stretching of the perineum was taking place. A change in fetal heart tones that led the midwife to believe the birth needed to occur quickly was the circumstance that had the greatest degree of influence on the participant's (90.6%) decision to provide more direction during bearing-down efforts. Many participants indicated that they also were influenced to provide more direction when women in labor asked for more direction (73.3%) or appeared to be fatigued (74.6%).

## Discussion

The majority of CNMs/CMs use supportive approaches to bearing-down efforts during second-stage labor care and most used directive approaches as an intervention aimed at avoiding potential problems.

## Introduction

The best approach to maternal bearing down during the second stage of labor has long been of interest to maternity care providers. Two distinct approaches to bearing down have been described in the literature: directive and supportive.<sup>1, 2</sup> When using the directive approach, care providers offer specific directions for women to use sustained Valsalva pushes (strenuous sustained bearing down against a closed glottis<sup>3</sup>) from the time of complete cervical dilatation until the birth of the newborn.<sup>1, 2</sup> The directive approach often entails instructing the woman to begin pushing immediately after the cervix is completely dilated. In contrast, when using the supportive approach, care providers encourage women to push in response to the involuntary, physiologic urges that normally occur during second-stage labor.<sup>1, 2</sup> Research comparing directive and supportive approaches has identified that supportive approaches lead to optimal birth outcomes and maximize a woman's ability to give birth spontaneously.<sup>1, 4</sup> However, widespread adoption of supportive approaches to caring for women in second-stage labor has not occurred, and the majority of maternity care providers continue to be directive in their approaches when caring for women in second-stage labor.<sup>5</sup> The purpose of this study was to describe the approaches to maternal bearing-down efforts used by certified nurse-midwives (CNMs) and certified midwives (CMs) when caring for women during the second stage of labor. In addition to identifying current practices of CNMs/CMs, this study sought to identify circumstances that affect the use of evidence-based approaches to care during the second stage of labor.

Criticism of the practice of directing women to use long, sustained pushes during second-stage labor began over half a century ago<sup>6</sup> and continues today.<sup>1, 7, 8</sup> One of the early critics was Constance Beynon, an obstetrician-gynecologist who challenged her colleagues who “still seem to consider it their function to aid and abet and even coerce the mother into forcing the foetus as fast as she can through her birth canal.”<sup>6</sup> Beynon<sup>6</sup> documented the efficacy of spontaneous bearing-down efforts to facilitate vaginal birth in an observational study of 100 women who were allowed to engage in what she referred to as “the spontaneous second stage.” Despite

these early findings, research comparing directive versus supportive approaches to caring for women during second-stage labor did not appear in the literature until publication of a landmark study in 1981 that demonstrated improved fetal oxygenation when women pushed spontaneously.<sup>9</sup>

Underlying the persistent use of directive approaches to second-stage labor management appears to be the erroneous assumption that the use of spontaneous bearing-down efforts results in a prolonged second stage of labor.<sup>4</sup> However, researchers have identified no significant difference in maternal outcomes<sup>10-13</sup> or neonatal outcomes<sup>9-19</sup> relative to the length of the second stage or duration of time spent pushing in the second stage. Further, there is no strong evidence that spontaneous approaches to maternal bearing down lead to an increased incidence of prolonged second-stage labor.<sup>8, 14, 20, 21</sup> Indeed, during the last 25 years, researchers have documented improved outcomes for both mothers and neonates when they are cared for with supportive approaches during second-stage labor. Findings relative to fetal and neonatal outcomes include improved fetal oxygenation (as measured with cord blood gas and fetal heart rate patterns) and neonatal Apgar scores when women were allowed to bear down in response to the physiologic urges they experience during second-stage labor, rather than in response to directions to push using the Valsalva maneuver.<sup>8, 9, 21-23</sup> Findings relative to maternal outcomes include improved perineal and long-term urogynecologic outcomes in women who push spontaneously rather than in response to commands for long, sustained Valsalva pushes.<sup>10, 20, 24-27</sup> With regard to women's experience of second-stage labor, investigators have identified that primigravidas who are allowed a period of rest before initiating bearing-down efforts during the second stage experienced less fatigue than those who begin pushing immediately after the cervix was fully dilated.<sup>11, 14, 28</sup> Finally, women who are allowed to bear down spontaneously report higher levels of satisfaction with their birth experience than women who are instructed to use Valsalva-like pushing during second-stage labor.<sup>8</sup>

Although research on the outcomes of pushing techniques used during the second stage of labor consistently demonstrates improved outcomes when care providers are supportive of spontaneous maternal bearing down, recent research suggests that few clinicians use this approach. The Listening to Mothers II Survey<sup>5</sup> demonstrated that 75% of women received direction from their care providers during second-stage labor regarding when and how to push. Missing from the literature is information about the practices used by specific types of clinicians in response to maternal bearing-down efforts as well as the barriers encountered in the use of evidence-based practice. This study was designed to fill this gap in the literature by describing the second-stage practices of CNMs/CMs.

## Methods

### Design

This descriptive study reports the practices used by CNMs/CMs in response to maternal bearing-down efforts during the second stage of labor. A survey methodology was used to collect data for this study.

## Sample

Participants for this study were randomly selected from the list of active members of the American College of Nurse-Midwives (ACNM) using a computer-generated, random-numbers table. The number of participants was determined by calculating the sample size needed for a descriptive study of a continuous variable.<sup>29</sup> Using this calculation, it was determined that 705 CNM/CM members should be surveyed to ensure responses from at least 339 CNMs/CMs who provided care for women in the second stage of labor.

Institutional review board approval for this study was obtained from Marquette University. Permission to use the ACNM membership and mailing lists to solicit participants in this study was obtained from the ACNM Division of Research.

## Instrument

Data were collected using an investigator-developed questionnaire addressing the practices used by CNMs/CMs when caring for women during the second stage of labor. The questionnaire was designed and content validity established using the following procedures: Instrument development began by using a focus group comprised of 7 CNM participants to identify potential topics and items for the instrument. The overarching themes identified during the focus group were formulated into preliminary items that were then reviewed with 4 CNMs during individual, semistructured interviews. The purpose of the focus group and interviews was to learn from CNMs about their experiences when caring for women in second-stage labor. The practices described by these midwives were categorized according to themes and formed the basis of item development for the survey instrument. The initial items were pretested twice with 2 separate content experts using a cognitive interview process.<sup>30</sup> Based on feedback from these interviews, changes were made to the items to clarify the questions, enhance recall, and reduce respondent fatigue. A third iteration of the questionnaire was then administered individually to 3 CNM experts using an interactive technique to evaluate questionnaires, referred to as the intensive interview technique described by Royston.<sup>31</sup> Respondents were asked to think aloud while responding to each item. This process allowed the respondents to clarify that they understood the questions in the way they were intended to be asked. Final changes to the questionnaire were made before further pilot testing was conducted.

Prior to full implementation of the survey, the questionnaire was pilot tested with 10 CNMs who were not involved in the process of questionnaire development. Items on the questionnaire were divided into 2 subsets based on the concept they were designed to measure and assessed for reliability by measuring internal consistency with the Cronbach  $\alpha$ . The first subset included items developed to identify the specific care practices and beliefs of midwives relative to management of the second stage of labor (Cronbach  $\alpha$  0.837). The second subset included items intended to identify perceived barriers to the use of supportive approaches to second-stage labor care (Cronbach  $\alpha$  0.777). Findings indicated that these questions were measuring the content they were developed to measure. The final questionnaire, which was printed in booklet format, included 22 demographic items and 59 items that used Likert-type scales to quantify the behaviors and beliefs of CNMs/CMs caring for

women during second-stage labor and the potential barriers encountered to using spontaneous approaches.

### Procedure

Questionnaires were mailed, along with \$1 and a self-addressed, stamped return envelope, through the US Postal Service to a simple random sample of 705 active members of ACNM. A cover letter explaining the purpose of the study, the researcher's qualifications, an opportunity to decline participation, and a request for signed consent accompanied each questionnaire. The procedures recommended by Dillman<sup>32</sup> were used to maximize the response rate. One week after the initial mailing, a postcard was sent to the 705 members of the sample population to thank those who had responded and provide a gentle reminder to those who had not. A second round of questionnaires was mailed to nonresponders 3 weeks after the reminder postcards were sent.

### Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS 16.0; Chicago, IL). Data were described using univariate statistics. Statistical comparisons were performed using Wilcoxon signed rank tests to test for differences between 2 related groups. Statistical comparisons for independent observations were performed using the Mann-Whitney test for 2 groups and the Kruskal-Wallis analysis of variance for 3 or more groups. Correlations between ordinal level variables were assessed using Spearman correlation coefficients. A type I error of .01 was used for all tests of statistical significance.

### Results

Questionnaires were mailed to 705 CNMs/CMs, and 512 responses were received, for an overall response rate of 72.6%. Of those who responded to the survey, 375 (73.2%) respondents had attended births in the previous 6 months and were included in the final study sample. The characteristics of the study sample are described in [Table 1](#).

Table 1. **Demographic Characteristics of Participants (N = 375)**

Characteristic	Results
<b>Age, mean (SD), range, <sup>y</sup></b>	49.7 (9.7), 25-69
<b>CNM/CM practice, mean (SD), range, <sup>b</sup> <sup>y</sup></b>	13.7 (8.6), 1-38
<b>No. births attended in previous 6 mo<sup>c</sup></b>	
Without epidural, mean (SD), range	22.8 (18.6), 1-120
With epidural, mean (SD), range	26.0 (23.4), 0-112
<b>Time spent in professional reading per mo, mean (SD), range, <sup>d</sup> <sup>h</sup></b>	7.7 (6.6), 0-40
<b>Gender, <sup>e</sup> n (%)</b>	
Female	367 (98.9)
Male	4 (1.1)
<b>Midwifery education, n (%)</b>	
Basic certificate	92 (24.7)

Characteristic	Results
ADN to MSN bridge	11 (3.0)
Direct entry program	9 (2.4)
Graduate program	229 (61.6)
Post-master–degree certificate	30 (8.1)
DNP	1 (0.3)
<b>Highest academic degree, n (%)</b>	
Associate	25 (6.8)
BSN	17 (4.6)
Bachelor (not in nursing)	2 (0.5)
MSN	252 (68.5)
Master of midwifery	35 (9.5)
Other master	21 (5.7)
Doctorate	16 (4.3)
<b>Work Setting,<sup>f</sup> n (%)</b>	
Level 1 hospital	84 (19.9)
Level 2 hospital	152 (36.0)
Level 3 hospital	145 (34.4)
Home	21 (4.9)
Birth center	20 (4.7)
<b>Serve as preceptor<sup>g</sup>, n (%)</b>	
CNM/CM students	258 (70.9)
Medical students	131 (36.0)
Nursing students	181 (49.7)
Residents	98 (26.9)
<b>Continuing education, n (%)</b>	
Participates in CMP or CCA	339 (92.1)

Abbreviations: ADN, associate degree in nursing; BSN, bachelor of science in nursing; CCA, Continuing Competency Assessment; CMP, Certification Maintenance Program; CNM/CM, certified nurse-midwife/certified midwife; DNP, doctor of nursing practice; MSN, master of science in nursing; SD, standard deviation.

<sup>a</sup>n = 370 due to missing data.

<sup>b</sup>n = 372 due to missing data.

<sup>c</sup>n = 360 due to missing data.

<sup>d</sup>n = 343 due to missing data.

<sup>e</sup>Total < 375 due to missing data.

<sup>f</sup>Total exceeds 100%. Some respondents worked in multiple settings.

<sup>g</sup>Total exceeds 100%. Some respondents precepted multiple types of trainees.



## Practice Characteristics of the Certified Nurse-Midwives/Certified Midwives

Most of the CNM/CM respondents attended a considerable number of births during the 6-month period before completion of the questionnaire. The average number of births attended by CNMs/CMs during the 6-month time period included 22.8 births without an epidural and 26.0 births with an epidural. Respondents also were asked to identify the degree of autonomy they experience when caring for women in low-risk labor. On a Likert scale of 0 (no autonomy) to 10 (complete autonomy), the respondents rated themselves as very autonomous when caring for healthy women during labor and birth (mean 9.1; standard deviation 1.2).

Most of the respondents reported spending a substantial amount of time with their patients late in the first stage of labor and during the second stage of labor. The majority of the respondents (71.8%) reported being present with their patients more than 50% of the time during the late first stage of labor. Almost all of the respondents (91.9%) reported being present with their patients during at least 50% of the second stage of labor, and most (78.3%) were present more than 75% of the time. Only 11.9% of the respondents believed that women without an epidural often or usually needed specific direction about when and how to push during the second stage. In contrast, 69.5% of the respondents believed that women with an epidural often or usually needed specific direction about when and how to push.

### Approaches Related to Initiating Bearing-Down Efforts

When caring for women without epidural anesthesia, 82.5% of the respondents thought it was very important to wait for a woman to express an urge to push before initiating bearing-down efforts. Only 25.9% of respondents reported that it was very important to check a woman's cervix before initiating bearing-down efforts. Specific practices used by CNMs/CMs as their patients initiated bearing-down efforts are described in [Table 2](#). Most CNMs/CMs (82.4%) often or almost always supported women without epidural anesthesia to initiate bearing-down efforts only when the woman felt an urge to do so, and 69.5% rarely or never directed a woman to use Valsalva pushing immediately upon complete cervical dilation. When caring for women with epidural anesthesia, 85.2% of CNMs/CMs often or almost always used the “laboring down” approach (eg, allowing a woman with an epidural to sleep or rest through contractions, without pushing, until she had an urge to push).

**Table 2. Practices Used by CNMs/CMs Regarding Initiation of Maternal Bearing-Down Efforts**

Practices Used, Based on Woman's Use of Epidural Anesthesia	N <sup>a</sup>	Never or Rarely n (%)	Sometimes n (%)	Often or Almost Always n (%)
<b>Women without an epidural (N = 375)</b>				
Supported a woman to begin pushing only when she felt the urge to push	370	9 (2.4)	56 (15.1)	305 (82.4)
Directed a woman to “take a quick breath and come right back to it	368	118 (32.1)	128 (34.8)	122 (33.1)

Practices Used, Based on Woman's Use of Epidural Anesthesia	N <sup>a</sup>	Never or Rarely n (%)	Sometimes n (%)	Often or Almost Always n (%)
before this contraction ends" after the first push with a contraction				
Told a woman when to start pushing with each contraction	371	165 (44.5)	135 (36.4)	71 (19.1)
Began directing a woman to use Valsalva pushing as soon as she was fully dilated	370	257 (69.5)	85 (23.0)	28 (7.6)
Delayed documenting the time a woman was completely dilated	367	212 (57.8)	88 (24.0)	67 (18.2)
<b>Women with an epidural (N = 345)</b>				
Allowed a woman to "labor down" — sleep or rest without pushing until she felt the urge to push	345	1 (0.3)	50 (14.5)	294 (85.2)
Allowed a woman to sleep or rest until there were fetal heart tone changes <sup>b</sup> suggesting she was near the second stage	344	13 (3.8)	72 (20.9)	259 (75.3)
Encouraged active bearing down only when the fetal head could be seen	344	133 (38.7)	122 (35.5)	89 (25.9)
Turned the epidural down or off to facilitate second-stage progress	343	167 (48.7)	123 (35.9)	53 (15.5)
Began directing a woman to use Valsalva pushing as soon as she was fully dilated	344	219 (63.7)	93 (27.0)	32 (9.3)
Delayed documenting the time a woman was completely dilated	345	205 (59.4)	73 (21.2)	67 (19.4)

Abbreviations: CNM/CM, certified nurse-midwife/certified midwife.

<sup>a</sup>Denominators change due to missing data.

<sup>b</sup>Change in fetal heart rate or variability.

## Supportive and Directive Approaches to Maternal Bearing-Down Efforts

The type and frequency of supportive and directive approaches to maternal bearing-down efforts used for women with and without epidural anesthesia during the second stage of labor are described and compared in [Table 3](#). Overall, the practices of CNMs/CMs are supportive of women's spontaneous bearing-down efforts. All respondents reported providing verbal affirmation when signs of progress were seen with a push, with 97% doing so often or almost always. When caring for women without an epidural, most of the respondents reported that they often or almost always support a woman's spontaneous bearing-down efforts without providing direction. The one directive practice that most respondents reported engaging in is providing more direction as the fetal head emerges and the final stretching of the perineum is taking place. Whether or not a woman has an epidural, most of the respondents reported that they encourage women to breathe or blow through these final contractions.

**Table 3. Supportive and Directive Practices Used When Caring for Women in Second-Stage Labor, Based on Woman's Use of Epidural Anesthesia**

Care Practices	N <sup>a</sup>	Never or Rarely n (%)	Sometimes n (%)	Often or Almost Always n (%)	Mean (SD)	P Value <sup>b</sup>
Supportive Practices						
Provide verbal affirmation when signs of fetal head progression are seen during a push						
Without an epidural	371	0 (0)	12 (3.2)	359 (96.8)	4.65 (0.54)	.027
With an epidural	348	0 (0)	9 (2.6)	339 (97.5)	4.71 (0.51)	
Offer words of encouragement with each push						
Without an epidural	370	3 (0.8)	20 (5.4)	347 (93.8)	4.59 (0.63)	.011
With an epidural	347	0 (0)	9 (2.6)	338 (97.4)	4.66 (0.53)	
Offer women the opportunity to touch the fetus's emerging head						
Without an epidural	371	4 (1.1)	24 (6.5)	343 (92.5)	4.55 (0.67)	.261
With an epidural	348	5 (1.4)	26 (7.5)	317 (91.1)	4.52 (0.70)	
Encourage position changes						
Without an epidural	364	3 (0.8)	27 (7.4)	334 (91.8)	4.45 (0.67)	<.001 <sup>c</sup>
With an epidural	345	15 (4.3)	48 (13.9)	282 (81.7)	4.25 (0.86)	
Supported spontaneous bearing- down efforts without providing direction						
Without an epidural	370	11 (3.0)	111 (30.3)	248 (67.0)	3.86 (0.83)	<.001 <sup>c</sup>
With an epidural	346	69 (19.9)	157 (45.4)	120 (34.7)	3.20 (0.90)	
Encourage women to make spontaneous noises						
Without an epidural	371	73 (19.7)	118 (31.8)	180 (48.5)	3.39 (1.11)	<.001 <sup>c</sup>
With an epidural	348	82 (23.6)	119 (34.2)	147 (42.2)	3.23 (1.09)	
Directive Practices						
Encourage women to breathe/blow through contractions as the final stretching of the perineum takes place						
Without an epidural	371	28 (7.5)	57 (15.4)	286 (77.1)	4.11 (0.97)	.314
With an epidural	348	29 (8.3)	42 (12.1)	277 (79.6)	4.15 (1.01)	
Help women identify where to push by inserting your fingers to apply downward pressure at the introitus						
Without an epidural	370	143 (38.6)	166 (44.9)	61 (16.5)	2.70 (0.87)	<.001 <sup>c</sup>
With an epidural	347	26 (7.4)	131 (37.6)	190 (54.8)	3.57 (0.84)	
Encourage long, sustained pushes for the entire contraction						
Without an epidural	370	171 (46.2)	140 (37.8)	59 (15.9)	2.57 (0.97)	<.001 <sup>c</sup>

Care Practices	N <sup>a</sup>	Never or Rarely n (%)	Sometimes n (%)	Often or Almost Always n (%)	Mean (SD)	P Value <sup>b</sup>
Encourage frequent, small pushing efforts to keep the fetal head from receding	346	76 (22.0)	136 (39.3)	134 (38.7)	3.14 (1.02)	
Without an epidural	369	197 (53.4)	115 (31.2)	57 (15.4)	2.44 (1.06)	<.001 <sup>c</sup>
With an epidural	348	160 (46.0)	114 (32.8)	74 (21.3)	2.63 (1.14)	
Remind women with each contraction that it is time to push						
Without an epidural	370	232 (62.7)	110 (29.7)	28 (7.6)	2.29 (0.85)	<.001 <sup>c</sup>
With an epidural	347	33 (9.5)	128 (36.9)	186 (53.6)	3.52 (0.83)	
Encourage women to push quietly						
Without an epidural	368	291 (79.1)	57 (15.5)	20 (5.4)	1.79 (0.93)	.060
With an epidural	348	268 (77.0)	63 (18.1)	17 (4.9)	1.87 (0.91)	

Abbreviations: SD, standard deviation.

<sup>a</sup>When caring for women without an epidural N = 375; when caring for women with an epidural N = 345; denominators change due to missing data.

<sup>b</sup>Wilcoxon signed rank test.

<sup>c</sup>  $P < .01$ .

When practices for women with and without epidural anesthesia were compared, the respondents were more likely to use more directive approaches when caring for women with an epidural. Wilcoxon signed rank test demonstrated that when CNMs/CMs were caring for women with an epidural, they were significantly more likely to encourage long, sustained pushes for the entire contraction and remind women with each contraction that it was time to push. Conversely, when CNMs/CMs were caring for women without an epidural, they were more likely to support a woman's spontaneous bearing-down efforts without providing direction and to encourage spontaneous noises. Most notable, however, is that there was no significant difference in the frequency with which the respondents offered words of encouragement with each push, provided verbal affirmation with signs of fetal descent, offered women the opportunity to touch the fetus's emerging head, and encouraged women to breathe or blow through contractions as the final stretching of the perineum was taking place.

### Circumstances Under Which Directive Practices Were Used

The circumstances under which CNMs/CMs were more likely to use directive practices when caring for women with or without an epidural during second-stage labor are described in [Table 4](#). The circumstance that had the greatest influence on participants' decision to provide more direction was a change in fetal heart rate (90.6%) that led the midwife to believe the birth needed to occur quickly. Most of the respondents also indicated that they were influenced to provide more direction when women in labor asked for more direction (73.3%) or appeared fatigued (74.6%) and when the midwives perceived that their patients were having difficulty coping with pain (69.3%). Very few of the respondents reported that pressure from their

consulting physician and/or pressure from the nurses caring for their patients influenced their decision to provide more direction.

**Table 4. Circumstances That Influenced the Decision to Provide More Direction When Caring for Women With or Without an Epidural During Second-Stage Labor (N = 375)**

<b>Circumstance</b>	<b>N<sup>a</sup></b>	<b>None or Only a Little n (%)</b>	<b>Some n (%)</b>	<b>Quite a Bit or a Great Deal n (%)</b>
Change in fetal heart tones indicating birth needed to occur quickly	374	3 (0.8)	32 (8.6)	339 (90.6)
Woman's condition (emotional or physical fatigue)	374	5 (1.3)	90 (24.1)	279 (74.6)
The woman asked for more direction	374	34 (9.1)	66 (17.6)	274 (73.3)
Level of descent that had occurred since initiating bearing down	373	4 (1.1)	97 (26.0)	272 (72.9)
Midwife's understanding of the woman's ability to cope with pain	374	16 (4.3)	99 (26.5)	259 (69.3)
Length of time a woman had been pushing	372	15 (4.0)	120 (32.3)	237 (63.7)
Position of the fetal head	371	43 (11.6)	156 (42.0)	172 (46.4)
Parity of the woman	373	72 (19.3)	137 (36.7)	164 (44.0)
Presence of thick meconium	369	66 (17.9)	144 (39.0)	159 (43.1)
Length of time a woman had been fully dilated	374	83 (22.2)	186 (49.7)	105 (28.1)
Length of time a woman had been in labor	373	127 (34.0)	177 (47.5)	69 (18.5)
Pressure from the consulting physician	373	246 (66.0)	81 (21.7)	46 (12.3)
Pressure from the nurses caring for the patient	374	266 (71.1)	81 (21.7)	27 (7.2)
Busy with other patients and needed to get done with the birth	374	313 (83.7)	52 (13.9)	9 (2.4)
Pressure from family members	373	310 (83.1)	56 (15.0)	7 (1.9)

<sup>a</sup>Denominators change due to missing data.

## Associations Between Demographic Characteristics and Care Practices

The relationship between the use of supportive and directive practices in women without epidural anesthesia and the age, perceived autonomy, years of practice, and hours per month of reading professional journals of the CNM/CMs were examined using Spearman correlation coefficients. The only statistically significant correlations were a positive correlation between years of practice and inserting fingers and applying pressure at the introitus ( $r_s = 0.167$ ;  $P = .001$ ) and a negative correlation between hours per month of reading peer-reviewed professional journals and encouraging long, sustained bearing-down efforts ( $r_s = -0.163$ ;  $P = .003$ ). There was

no statistically significant association between geographic location, practice setting, or time spent with a woman during the second stage of labor on the use of supportive or directive approaches to the women's bearing-down efforts. There was no significant difference in the care practices used by CNMs/CMs who precepted medical or midwifery students or who worked with residents. Participants who precepted nursing students were more likely to remind women with each contraction that it was time to push ( $z=-0.27$ ;  $P=.006$ ).

## Discussion

The midwife respondents in this study reported using primarily supportive approaches in response to maternal bearing-down efforts during the second stage of labor. These findings are consistent with those of Albers et al,<sup>33</sup> who reported that women cared for by midwives pushed using non-Valsalva methods more than 78% of the time. The findings of both of these studies suggest that CNMs/CMs primarily use evidence-based practices during second-stage labor that support maternal bearing-down efforts and result in optimal outcomes. These findings are in contrast to the findings of the Listening to Mothers II Survey,<sup>5</sup> which revealed that most women in the United States push during second-stage labor in response to direction from a care provider. Because midwives attend just over 10% of births in the United States,<sup>34</sup> it is likely that the findings of the Listening to Mothers II Survey reflect the care practices of other providers of labor and birth care who are not using approaches that are known to improve maternal and fetal outcomes.

Although the midwife respondents to this survey provide care that is primarily supportive of the spontaneous sensations women experience during second-stage labor, there were circumstances under which the respondents identified that they provide more direction. These circumstances included maternal or fetal issues that necessitated a more directive approach, such as a change in fetal heart rate that led the midwife to believe the birth needed to occur more quickly, a woman's request for more direction, a woman's perceived state of emotional or physical fatigue, the level of fetal descent that had occurred since initiating bearing-down efforts, the midwife's assessment of the woman's ability to cope with pain, and the length of time a woman had been pushing. This finding is consistent with the findings of other published research that examined why supportive birth attendants become directive in their approach to second-stage labor care. Similar to those of the current study, the reasons identified by Roberts et al<sup>2</sup> included cues from the woman or fetus, such as expressions of maternal pain or fear, diminished urge to push, and fetal distress. It is likely that the use of more directive practices when caring for women with epidural anesthesia in the current study reflects the recognition that more direction is often necessary for women who lack the involuntary, physiologic sensations that normally occur during second-stage labor. Similar to the findings of Roberts et al,<sup>2</sup> the midwife participants in the current study clearly articulated the use of direction as an intervention, primarily aimed at avoiding potential complications.

The midwives in the present study used approaches to supporting women during the second stage of labor that were previously characterized by Roberts et al<sup>2</sup> as "supportive direction" and "supportive praise." Supportive direction involved suggestions and minimal direction given to women during second-stage labor and including women in decision making about breathing

techniques or pushing positions. Supportive praise was identified as affirmation of the woman's involuntary efforts that were offered by the care provider.<sup>2</sup> All of the midwives in the present study reported providing verbal affirmation when signs of fetal head progression are seen during a push, and 94% of the respondents reported that they often, or almost always, offer words of encouragement with each push. The finding that the midwives in the current study viewed maternal requests for more direction as a leading contributor to their decision to provide more direction further exemplifies the use of supportive direction. It is possible that the participants in the current study thought that ignoring women's requests for more direction is a failure to listen to the needs expressed by the women for whom they care and that providing direction upon request is supportive of maternal bearing-down efforts. Further, providing affirmation with every push may be seen by the respondents as a way in which to empower women with the knowledge that they are capable of giving birth spontaneously.

There were almost no statistically significant associations between the demographic characteristics of the midwives and their use of supportive and directive care practices. These findings suggest that there is remarkable consistency in the use of supportive and directive approaches during the second stage of labor. Such consistency may reflect the philosophical underpinnings of midwifery care and the hallmarks of midwifery practice. Considered the essence of midwifery, these include a belief in the normalcy of labor and birth, a woman's right to self-determination and active participation in her health care, individualized care that is based on evidence, and nonintervention in the process of labor and birth with appropriate use of technology.<sup>35</sup> The findings of this study suggest that being "with woman" allows midwives to recognize and respond to the cues, both physical and emotional, they receive from the mother and fetus and, in so doing, support a woman's inherent ability to give birth spontaneously.

This study is limited by the same sources of potential error and bias that are common to all forms of survey research, including noncoverage error, which was difficult to avoid in this study because only midwives who were active members of ACNM were included in the sample population. Future research should focus on the practice patterns of other practitioners who care for women in labor, barriers to the implementation of supportive approaches to second-stage labor care, and efforts to promote the adoption of evidence-based practice by all providers of labor and birth care, including physicians and nurses. Such efforts will likely include an educational intervention to disseminate information regarding the safety and efficacy of supportive approaches to second-stage labor care.

This study offers information that challenges all providers of labor and birth care to adopt second-stage care practices that are evidence based and that lead to optimal outcomes for mothers and neonates. The evidence regarding approaches to care during second-stage labor identifies that supporting women's spontaneous bearing-down efforts, rather than directing women about when and how to push, results in optimal outcomes.<sup>1,4</sup> The current study demonstrates that almost all midwives use this evidence-based approach to care during second-stage labor. Except in circumstances in which a more directive approach was indicated to prevent potential complications, the midwife participants in the current study used supportive approaches to maternal bearing-down efforts in most instances. The practices used



by these midwives should serve as an example of the implementation of evidence in practice for all providers of labor and birth care. The time has come for supportive approaches to second-stage labor care to be considered the standard of care and for the routine use of directive approaches to be viewed as an unnecessary and potentially harmful intervention in the natural process of labor and birth.

## Conflict of Interest

None of the authors has any conflict of interest to disclose.

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